

35. CLAIMS

1. Use of hydrophobic charge-induction chromatography for the production of purified IL-18 binding protein (IL-18BP).
2. Use according to claim 1, wherein the hydrophobic charge-induction chromatography is carried out on a 4-mercapto-ethyl-pyridine (MEP) resin.
3. Use according to claim 1 or 2, wherein the hydrophobic charge-induction chromatography is used in combination with a step selected from immobilized metal ion affinity chromatography, ion exchange chromatography, hydrophobic interaction chromatography and reverse phase chromatography.
4. A process for the production of purified IL-18BP comprising subjecting a fluid to a step of hydrophobic charge-induction chromatography.
5. The process according to claim 4, wherein the hydrophobic charge-induction chromatography is carried out on a 4-mercapto-ethyl-pyridine (MEP) resin.
6. The process according to any of claims 4 or 5, further comprising a step selected from immobilized metal ion affinity chromatography, ion exchange chromatography, hydrophobic interaction chromatography and reverse phase chromatography.
7. The process according to claim 6, wherein the metal ion affinity chromatography is carried out on a chelating resin.
8. The process according to claim 6, wherein the ion exchange chromatography is cation exchange chromatography.
9. The process according to claim 8, wherein the cation exchange chromatography is carried out on a carboxymethyl (CM) resin.

10. The process according to claim 6, wherein the hydrophobic interaction chromatography is carried out on a phenyl resin.
11. The process according to claim 6, wherein the step of reverse phase chromatography is carried out on a polymeric reverse phase matrix.
12. The process according to claim 11, wherein the polymeric reverse phase matrix is reverse phase-source 30 RPC.
13. The process according to any of claims 4 to 12, comprising the steps of:
- (a) Subjecting the fluid to metal ion affinity chromatography;
  - (b) Subjecting the eluate of the metal ion affinity chromatography to hydrophobic charge-induction chromatography;
  - (c) Subjecting the eluate of the hydrophobic charge-induction chromatography to cation exchange chromatography.
  - (d) Subjecting the flow-through of the cation exchange chromatography to hydrophobic interaction chromatography;
  - (e) Subjecting the eluate of the hydrophobic interaction chromatography to reverse phase chromatography.
14. The process according to any of the preceding claims, further comprising one or more ultrafiltration steps.
15. The process according to any of the preceding claims, further comprising one or more virus removal filtration steps.
16. The process according to any of the preceding claims, comprising an initial capture step.
17. The process of claim 16, wherein the capture step is carried out by strong anion exchange chromatography.

18. The process of claim 17, wherein the capture step is carried out on a quaternary ammonium (Q) resin.

19. The process of claim 17, wherein the capture step is carried out on a TMAE resin.

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20. The use according to any of claims 1 to 3 or the process according to any of claims 4 to 19, wherein the IL-18BP is human, recombinant IL-18BP.

10 21. The use according to any of claims 1 to 3 or the process according to any of claims 4 to 19, wherein the fluid is serum-free cell culture supernatant.